

REMARKS

This Amendment is in response to the Office Action mailed October 4, 2006, wherein the Examiner rejected Claims 18-30, all the claims in the application. Reconsideration of the application in view of the amendments presented herewith and the following remarks is respectfully requested.

Initially, Applicant would like to thank the Examiner for the careful consideration given this case. In response, Claims 18, 26, 29 and 30 have been amended and Claim 25 has been canceled. The amended claims introduce no new matter and are fully supported by the specification. Applicant respectfully requests entry of the amendments as they place the application in condition for allowance or in better condition for possible appeal.

Prior to discussing the rejections, Applicant takes this opportunity to set forth the following brief remarks about his new filter sensor and indicator for vacuum cleaners.

Applicant's unique new filter sensor and indicator for vacuum cleaners provides a signal to a user that a filter in a vacuum cleaner requires cleaning or replacing. (See Abstract.) More specifically, Applicant's filter monitor senses the air pressure in a flow chamber of a vacuum cleaner located between the filter and a flow inducing device selectively driven by the power source. The filter monitor includes an electrical circuit including a pressure actuated switch and an indicator connected to the circuit. The pressure actuated switch closes to complete the circuitry between the indicator and electrical power source in response to the pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement. In other words, the pressure actuated electrical switch is responsive to the pressure in the flow chamber between the filter and motor to determine a filter condition suggesting cleaning or replacement.

None of the cited references disclose or suggest a filter sensor and indicator for a vacuum cleaner as disclosed and claimed in the application. In fact, none of the cited references even mention or suggest a filter sensor and indicator for vacuum cleaners where the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power source in response to the pressure in the flow chamber falling below a pre-determined minimum pressure

threshold thereby indicating that the filter requires cleaning or replacement. Thus, Applicant is entitled to claims directed to the filter sensor and indicator for vacuum cleaners where the pressure actuated switch is operatively connected to the flow chamber between the filter and motor with the switch closes to complete the circuitry between the indicator and electrical power source in response to pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement.

Rejection Based On 35 U.S.C. 112, Second Paragraph

The Examiner rejects Claims 29-30 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More specifically, the Examiner states that Claims 29-30 recite the limitation “the light” in line 1 but there is no antecedent basis for this limitation in Claim 29-30. The Examiner states that it appears as though Claims 29-30 were intended to depend from Claim 28.

To advance prosecution of this application, Applicants have currently amended Claims 29-30 to address the concerns of the Examiner. Therefore, this rejection is rendered moot. Withdrawal of the present rejection is respectfully requested.

Rejection Based On Kurz In View Of Chrisco Under 35 U.S.C. § 103 (a)

The Examiner rejected Claims 18-21, 26 and 29-30 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 4,233,597 to Kurz (“Kurz”) in view of U.S. Patent No. 5,351,035 to Chrisco (“Chrisco”). Applicant respectfully traverses this rejection for the following reasons.

The Examiner concedes that Kurz is silent as to the specific construction of vacuum cleaners and that Kurz does not disclose a vacuum cleaner having a flow chamber between the filter and the flow inducing device as claimed. The Examiner then refers Chrisco to cure this deficiency. Accordingly, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the upstream filter arrangement of Chrisco into the vacuum cleaner of Kurz to allow the filter to collect dust prior to the air reaching the motor to increase the life expectancy of the motor. Applicant respectfully disagrees.

In order to establish obviousness of a claimed invention, all elements of the claims must be disclosed, taught or suggested by the prior art. None of the references teach Applicant's filter sensor and indicator, which measures the pressure in the flow chamber between the filter and motor to determine a filter condition suggesting cleaning or replacement.

Applicant agrees with the Examiner that Kurtz does not disclose a vacuum cleaner having a flow chamber between the filter and the flow inducing device. Kurtz discloses an apparatus for indicating pressure variation caused by the accumulation of dust in dust bags in a vacuum cleaner. See Abstract. However, Kurtz does not mention the specific construction of the vacuum cleaners. Further, Kurtz's invention is directed to a vacuum cleaner with a dust bag. This is unlike the present invention in which the filter sensor and indicator may also be used with a bagless vacuum cleaner.

Chrisco discloses a clogged filter indicator for a heating and air conditioning system. See Column 1, lines 17-22. Accordingly, one skilled in the art would not look to Chrisco to correct the deficiency in Kurtz which is directed to vacuum cleaners not heating and air conditioners.

None of the cited references disclose or suggest Applicant's filter sensor and indicator for vacuum cleaners including the pressure actuated electrical switch that measures the pressure in the flow chamber between the filter and motor to determine the filter condition suggesting cleaning or replacement. In view of this, Applicant is entitled to claim the filter sensor and indicator for vacuum cleaners including a pressure actuated electrical switch that measures the pressure in the flow chamber between the filter and motor to determine a filter condition suggesting cleaning or replacement as set forth in independent Claims 18 and 26.

Applicant respectfully submit that the claimed filter sensor and indicator for vacuum cleaners is not obvious over the teaching of Kurtz in view of Chrisco. In addition, one skilled in the art would find nothing in Kurtz or Chrisco alone or in combination that would disclose, teach or suggest the claimed filter sensor and indicator for vacuum cleaner. This is because there is no motivation taught in any of the references to combine the references in such a way to provide the filter sensor and indicator for vacuum cleaners as claimed. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 103 (a) be reconsidered and withdrawn.

Rejection Based On Kurz And Chrisco And Further In View Of Martin Under 35 U.S.C. § 103 (a)

The Examiner rejected Claims 22-25 and 27 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 4,233,597 to Kurz ("Kurz") and U.S. Patent No. 5,351,035 to Chrisco ("Chrisco") and further in view of U.S. Patent No. 4,733,431 to Martin ("Martin"). Applicant respectfully traverses this rejection for the following reasons.

The Examiner has conceded that Kurtz does not disclose the circuit including latching means. The Examiner then refers to Martin to cure this deficiency. Accordingly, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the latching relay of Martin into the circuit of Kurtz to provide a steady burning indicator light once the pressure threshold is exceeded to ensure that the operator does not fail to observe an intermittently activated indicator light and to increase the life expectancy of the indicator light by preventing the light from experiencing multiple on-off sequences which can lead to premature failure due to thermal stress as is well known in the art. Applicant respectfully disagrees.

In order to establish obviousness of a claimed invention, all elements of the claims must be disclosed, taught or suggested by the prior art. None of the references teach Applicant's filter sensor and indicator, which measures the pressure drop across the filter or measures the pressure between the filter and motor to determine a filter condition suggesting cleaning or replacement.

As stated above, both Kurtz or Chrisco do not disclose Applicant's filter sensor and indicator for vacuum cleaners including a the pressure actuated electrical switch that measures the pressure in the flow chamber between the filter and motor to determine a filter condition suggesting cleaning or replacement. As such, independent claims are also patentable over any rejection based on Kurtz or Chrisco.

Martin discloses a vacuum cleaner with performance monitoring system that includes three sensors for monitoring the differential pressure between (1) an intake port and the dust collecting compartment, (2) the outside of the vacuum cleaner and the intake port and (3) the discharge from the vacuum cleaner and the dust collecting compartment. See Col. 2 lines 40-45. However, Martin does not disclose a pressure actuated electrical switch that responds when the pressure in the flow

chamber is below a pre-determined minimum pressure threshold indicating that the filter requires cleaning or replacement. Moreover, the three sensors in Martin measures pressure drops across different areas and is for use with a canister type vacuum cleaner with a dust bag. Accordingly, one skilled in the art would not look to Martin to correct the deficiency in Kurz and Chrisco.

Applicant respectfully submit that the claimed filter sensor and indicator for vacuum cleaners is not obvious over the teaching of Kurtz or Chrisco in view of Martin. In addition, one skilled in the art would find nothing in Kurtz, Chrisco or Martin alone or in combination that would disclose, teach or suggest the claimed composition or any reason for making it. This is because there is no motivation taught in any of the references to combine the references in such a way to provide the filter sensor and indicator for vacuum cleaners as claimed. Further, since independent Claims 18 and 26 are considered by Applicants to define patentable subject matter, rejected claims 19-24 and 27-30, by virtue of its dependency from Claims 1 and 26, respectively, is similarly considered by Applicants to patentably define itself over the cited references. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 103 (a) be reconsidered and withdrawn.

It is respectfully submitted that in view of the amendment and above remarks, the application is in condition for final allowance. Accordingly, the Examiner is respectfully requested to review that application at an early date with a view towards issuing a favorable action thereon. If upon review of the application the Examiner is unable to issue an immediate Notice of Allowance, the Examiner is requested to telephone the undersigned attorney with a view towards resolving any outstanding issues.

Early and favorable action is earnestly solicited.

Respectfully submitted,

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